

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/576,982
Source: IFWP
Date Processed by STIC: 5/3/06

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IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/576,982

DATE: 05/03/2006
TIME: 11:21:20

Input Set : A:\50021-026.txt
Output Set: N:\CRF4\05032006\J576982.raw

3 <110> APPLICANT: Queensland University of Technology
5 <120> TITLE OF INVENTION: Protein expression
7 <130> FILE REFERENCE: S80769691
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/576,982
C--> 9 <141> CURRENT FILING DATE: 2006-04-24
9 <150> PRIOR APPLICATION NUMBER: 2003905886
10 <151> PRIOR FILING DATE: 2003-10-24
12 <160> NUMBER OF SEQ ID NOS: 20
14 <170> SOFTWARE: PatentIn version 3.2
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 50
18 <212> TYPE: PRT
19 <213> ORGANISM: Lactobacillus fermentum
21 <400> SEQUENCE: 1
23 Asp Thr Ile Tyr Thr Val Gln Ser Gly Asp Thr Leu Ser Gly Ile Ser
24 1 5 10 15
27 Tyr Lys Phe Ala Lys Asp Asn Ser Met Ile Asn Asp Leu Ala Lys Lys
28 20 25 30
31 Asn Asn Ile Gln Asp Ile Asn Lys Ile Phe Val Gly Gln Lys Leu Ile
32 35 40 45
35 Ile Lys
36 50
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 81
41 <212> TYPE: PRT
42 <213> ORGANISM: Lactobacillus fermentum
44 <400> SEQUENCE: 2
46 Ser Tyr Thr Ser Asn Ala Ser Gly Ser Glu Ala Ala Ala Lys Ala Trp
47 1 5 10 15
50 Ile Ala Gly Arg Glu Ser Gly Gly Asn Tyr Asn Ala Thr Asn Gly Gln
51 20 25 30
54 Tyr Ile Gly Lys Tyr Gln Leu Ala Ala Ser Tyr Leu Gly Gly Asp Tyr
55 35 40 45
58 Ser Pro Ala Asn Gln Glu Arg Val Ala Asp Gln Tyr Val Ala Ser Arg
59 50 55 60
62 Tyr Gly Ser Trp Thr Ala Ala Gln Gln Phe Trp Gln Ala Asn Gly Trp
63 65 70 75 80
66 Tyr
70 <210> SEQ ID NO: 3
71 <211> LENGTH: 44
72 <212> TYPE: PRT
73 <213> ORGANISM: Lactobacillus fermentum
75 <400> SEQUENCE: 3

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77 Ser Asp Gly Glu Ile Gln Glu Tyr Asn Ala Gln Asn Ala Ala Asn Ala
78 1 5 10 15
81 Asn Val Ala Asn Asn Asn Thr Gln Ala Thr Gln Gln Gln Thr Ala Gln
82 20 25 30
85 Ala Gln Pro Gln Gln Ala Gln Ser Gln Ala Asn Gln
86 35 40
89 <210> SEQ ID NO: 4
90 <211> LENGTH: 30
91 <212> TYPE: PRT
92 <213> ORGANISM: Lactobacillus fermentum
94 <400> SEQUENCE: 4
96 Met Ile Ser Lys Lys Asn Phe Ala Lys Val Ser Ala Thr Leu Gly Ala
97 1 5 10 15
100 Val Ala Leu Gly Val Ser Ala Thr Ala Thr Ala Ala Asn Ala
101 20 25 30
104 <210> SEQ ID NO: 5
105 <211> LENGTH: 175
106 <212> TYPE: PRT
107 <213> ORGANISM: Lactobacillus fermentum
109 <400> SEQUENCE: 5
111 Asp Thr Ile Tyr Thr Val Gln Ser Gly Asp Thr Leu Ser Gly Ile Ser
112 1 5 10 15
115 Tyr Lys Phe Ala Lys Asp Asn Ser Met Ile Asn Asp Leu Ala Lys Lys
116 20 25 30
119 Asn Asn Ile Gln Asp Ile Asn Lys Ile Phe Val Gly Gln Lys Leu Ile
120 35 40 45
123 Ile Lys Ser Asp Gly Glu Ile Gln Glu Tyr Asn Ala Gln Asn Ala Ala
124 50 55 60
127 Asn Ala Asn Val Ala Asn Asn Thr Gln Ala Thr Gln Gln Gln Thr
128 65 70 75 80
131 Ala Gln Ala Gln Pro Gln Gln Ala Gln Ser Gln Ala Asn Gln Ser Tyr
132 85 90 95
135 Thr Ser Asn Ala Ser Gly Ser Glu Ala Ala Ala Lys Ala Trp Ile Ala
136 100 105 110
139 Gly Arg Glu Ser Gly Gly Asn Tyr Asn Ala Thr Asn Gly Gln Tyr Ile
140 115 120 125
143 Gly Lys Tyr Gln Leu Ala Ala Ser Tyr Leu Gly Gly Asp Tyr Ser Pro
144 130 135 140
147 Ala Asn Gln Glu Arg Val Ala Asp Gln Tyr Val Ala Ser Arg Tyr Gly
148 145 150 155 160
151 Ser Trp Thr Ala Ala Gln Gln Phe Trp Gln Ala Asn Gly Trp Tyr
152 165 170 175
155 <210> SEQ ID NO: 6
156 <211> LENGTH: 205
157 <212> TYPE: PRT
158 <213> ORGANISM: Lactobacillus fermentum
160 <400> SEQUENCE: 6
162 Met Ile Ser Lys Lys Asn Phe Ala Lys Val Ser Ala Thr Leu Gly Ala
163 1 5 10 15

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166 Val Ala Leu Gly Val Ser Ala Thr Ala Thr Ala Ala Asn Ala Asp Thr
167 20 25 30
170 Ile Tyr Thr Val Gln Ser Gly Asp Thr Leu Ser Gly Ile Ser Tyr Lys
171 35 40 45
174 Phe Ala Lys Asp Asn Ser Met Ile Asn Asp Leu Ala Lys Lys Asn Asn
175 50 55 60
178 Ile Gln Asp Ile Asn Lys Ile Phe Val Gly Gln Lys Leu Ile Ile Lys
179 65 70 75 80
182 Ser Asp Gly Glu Ile Gln Glu Tyr Asn Ala Gln Asn Ala Ala Asn Ala
183 85 90 95
186 Asn Val Ala Asn Asn Asn Thr Gln Ala Thr Gln Gln Gln Thr Ala Gln
187 100 105 110
190 Ala Gln Pro Gln Gln Ala Gln Ser Gln Ala Asn Gln Ser Tyr Thr Ser
191 115 120 125
194 Asn Ala Ser Gly Ser Glu Ala Ala Ala Lys Ala Trp Ile Ala Gly Arg
195 130 135 140
198 Glu Ser Gly Gly Asn Tyr Asn Ala Thr Asn Gly Gln Tyr Ile Gly Lys
199 145 150 155 160
202 Tyr Gln Leu Ala Ala Ser Tyr Leu Gly Gly Asp Tyr Ser Pro Ala Asn
203 165 170 175
206 Gln Glu Arg Val Ala Asp Gln Tyr Val Ala Ser Arg Tyr Gly Ser Trp
207 180 185 190
210 Thr Ala Ala Gln Gln Phe Trp Gln Ala Asn Gly Trp Tyr
211 195 200 205
214 <210> SEQ ID NO: 7
215 <211> LENGTH: 90
216 <212> TYPE: DNA
217 <213> ORGANISM: Lactobacillus fermentum
219 <400> SEQUENCE: 7
220 atgatttctaa agaaaaactt tgctaaagta tctgctactc ttggtgcaagt ggcccttaggt 60
222 gtttgtgcaa cggctactgc tgctaatgct 90
225 <210> SEQ ID NO: 8
226 <211> LENGTH: 150
227 <212> TYPE: DNA
228 <213> ORGANISM: Lactobacillus fermentum
230 <400> SEQUENCE: 8
231 gacactatct acaccgtaca aagtggtgac acacttcag gtatttctta caaatttgct 60
233 aaagacaaca gtatgatcaa tgatcttgct aagaagaaca atattcaaga tattaacaag 120
235 atttttgtt gtcaaaaagtt aatcatcaag 150
238 <210> SEQ ID NO: 9
239 <211> LENGTH: 132
240 <212> TYPE: DNA
241 <213> ORGANISM: Lactobacillus fermentum
243 <400> SEQUENCE: 9
244 agcgatggtg aaattcaaga atacaatgct caaaatgcag ctaatgcaaa ttagcaaac 60
246 aacaatactc aagctacaca acaacaaact gctcaagcac aacctcaaca agcacaaagc 120
248 caagctaacc aa 132
251 <210> SEQ ID NO: 10
252 <211> LENGTH: 246

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Input Set : A:\50021-026.txt
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253 <212> TYPE: DNA
254 <213> ORGANISM: Lactobacillus fermentum
256 <400> SEQUENCE: 10
257 agctacactt caaatgcgtt aggttcagaa gctgctgcta aagcttgat tgccggcgt 60
259 gaatcagggt gtaactacaa cggccacaac ggtcaataca ttggtaagta ccaatttagct 120
261 gcatcataacc ttgggtgtga ctactcacca gctaaccagg aacgcgttgc tgaccaatac 180
263 gttgcagtc gttacggttc ttggactgtc gcccaacaat ttggcaagc aacccgggttgg 240
265 tactaa
268 <210> SEQ ID NO: 11
269 <211> LENGTH: 528
270 <212> TYPE: DNA
271 <213> ORGANISM: Lactobacillus fermentum
273 <400> SEQUENCE: 11
274 gacactatctt acaccgtaca aagtgggtac acactttcag gtattttctta caaattttgct 60
276 aaagacaaca gtatgtacaa tgatcttgc aagaagaaca atattcaaga tattaacaag 120
278 atttttgtt gtcaaaagg aatcatcaag agcgatgggt aaattcaaga atacaatgtct 180
280 caaaatgcag ctaatgcaaa tgttagcaac aacaataactc aagctacaca acaacaaaact 240
282 gctcaaggcac aacctcaaca agcacaaagg caagcttaacc aaagctacac ttccaaatgtct 300
284 tcagggttcag aagctgctgc taaagcttgg attggccgtc gtgaatgggg tggttaactac 360
286 aacggccacaa acggtaataa cattggtaag taccatttttgcatcata ccttgggtgg 420
288 gactactcac cagctaacc aagaacgcgtt gctgaccaat acgttgcag tcgttacgg 480
290 tcttggactg ctgcccaaca attctggcaaa gcaaaacgggtt ggtactaa 528
293 <210> SEQ ID NO: 12
294 <211> LENGTH: 618
295 <212> TYPE: DNA
296 <213> ORGANISM: Lactobacillus fermentum
298 <400> SEQUENCE: 12
299 atgatttctt agaaaaactt tgctaaagta tctgctactc ttgggtcagt ggccttaggt 60
301 gttagtgcac cggctactgc tgctaatgtct gacactatctt acaccgtaca aagtgggtac 120
303 acactttcag gtattttctta caaattttgtt aaagacaaca gtatgtacaa tgatcttgc 180
305 aagaagaaca atattcaaga tattaacaag atttttgtt gtcaaaagg aatcatcaag 240
307 agcgatgggtt aaattcaaga atacaatgtct caaaatgcag ctaatgcaaa tgttagcaac 300
309 aacaataactc aagctacaca acaacaaaact gctcaaggcac aacctcaaca agcacaaagg 360
311 caagcttaacc aaagctacac ttcaaatgtct tcagggttcag aagctgctgc taaagcttgg 420
313 attggccgtc gtgaatcagg tggtaactac aacggccacaa acggtaataa cattggtaag 480
315 taccatttttgcatcata ccttgggtgg gactactcac cagctaacc aagaacgcgtt 540
317 gctgaccaat acgttgcag tcgttacggg tcttggactg ctgcccacaa attctggcaaa 600
319 gcaaaacgggtt ggtactaa 618
322 <210> SEQ ID NO: 13
323 <211> LENGTH: 90
324 <212> TYPE: DNA
325 <213> ORGANISM: Lactobacillus fermentum
328 <220> FEATURE:
329 <221> NAME/KEY: misc_feature
330 <222> LOCATION: (9)..(9) /
331 <223> OTHER INFORMATION: any nucleotide
333 <220> FEATURE:
334 <221> NAME/KEY: misc_feature
335 <222> LOCATION: (24)..(24) /

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336 <223> OTHER INFORMATION: any nucleotide
338 <220> FEATURE:
339 <221> NAME/KEY: misc_feature
340 <222> LOCATION: (30)..(30)
341 <223> OTHER INFORMATION: any nucleotide
343 <220> FEATURE:
344 <221> NAME/KEY: misc_feature
345 <222> LOCATION: (33)..(33)
346 <223> OTHER INFORMATION: any nucleotide
348 <220> FEATURE:
349 <221> NAME/KEY: misc_feature
350 <222> LOCATION: (36)..(36)
351 <223> OTHER INFORMATION: any nucleotide
353 <220> FEATURE:
354 <221> NAME/KEY: misc_feature
355 <222> LOCATION: (39)..(39)
356 <223> OTHER INFORMATION: any nucleotide
358 <220> FEATURE:
359 <221> NAME/KEY: misc_feature
360 <222> LOCATION: (42)..(42)
361 <223> OTHER INFORMATION: any nucleotide
363 <220> FEATURE:
364 <221> NAME/KEY: misc_feature
365 <222> LOCATION: (45)..(45)
366 <223> OTHER INFORMATION: any nucleotide
368 <220> FEATURE:
369 <221> NAME/KEY: misc_feature
370 <222> LOCATION: (48)..(48)
371 <223> OTHER INFORMATION: any nucleotide
373 <220> FEATURE:
374 <221> NAME/KEY: misc_feature
375 <222> LOCATION: (51)..(51)
376 <223> OTHER INFORMATION: any nucleotide
378 <220> FEATURE:
379 <221> NAME/KEY: misc_feature
380 <222> LOCATION: (54)..(54)
381 <223> OTHER INFORMATION: any nucleotide
383 <220> FEATURE:
384 <221> NAME/KEY: misc_feature
385 <222> LOCATION: (57)..(57)
386 <223> OTHER INFORMATION: any nucleotide
388 <220> FEATURE:
389 <221> NAME/KEY: misc_feature
390 <222> LOCATION: (60)..(60)
391 <223> OTHER INFORMATION: any nucleotide
393 <220> FEATURE:
394 <221> NAME/KEY: misc_feature
395 <222> LOCATION: (63)..(63)
396 <223> OTHER INFORMATION: any nucleotide

RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 6,24,30,33,36,39,42,45,48,51,54,57,60,63,66,69,72,75,78,81
Seq#:13; N Pos. 84,90
Seq#:14; N Pos. 6,15,18,24,27,33,36,39,42,48,60,72,87,90,129,132,141
Seq#:15; N Pos. 3,9,30,39,42,48,54,57,69,75,78,90,93,99,105,114,120,126
Seq#:16; N Pos. 3,9,12,18,21,24,27,33,36,39,45,54,57,60,66,69,72,84,87,93
Seq#:16; N Pos. 105,117,120,123,126,132,135,138,147,150,153,165,168,171,183
Seq#:16; N Pos. 186,189,192,198,201,207,210,213,231,237
Seq#:17; N Pos. 6,15,18,24,27,33,36,39,42,48,60,72,87,90,129,132,141,153
Seq#:17; N Pos. 159,180,189,192,198,204,207,219,225,228,240,243,249,255,264
Seq#:17; N Pos. 270,276,285,291,294,300,303,306,309,315,318,321,327,336,339
Seq#:17; N Pos. 342,348,351,354,366,369,375,387,399,402,405,408,414,417,420
Seq#:17; N Pos. 429,432,435,447,450,453,465,468,471,474,480,483,489,492,495
Seq#:17; N Pos. 513,519
Seq#:18; N Pos. 9,24,30,33,36,39,42,45,48,51,54,57,60,63,66,69,72,75,78,81
Seq#:18; N Pos. 84,90,96,105,108,114,117,123,126,129,132,138,150,162,177
Seq#:18; N Pos. 180,219,222,231,243,249,270,279,282,288,294,297,309,315,318
Seq#:18; N Pos. 330,333,339,345,354,360,366,375,381,384,390,393,396,399,405
Seq#:18; N Pos. 408,411,417,426,429,432,438,441,444,456,459,465,477,489,492
Seq#:18; N Pos. 495,498,504,507,510,519,522,525,537,540,543,555,558,561,564
Seq#:18; N Pos. 570,573,579,582,585,603,609

VERIFICATION SUMMARY
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L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:441 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:60
L:536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:538 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:60
L:540 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:120
L:640 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:642 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:60
L:644 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:120
L:879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:881 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:60
L:883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:120
L:885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:180
L:1297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:1299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:60
L:1301 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:120
L:1303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:180
L:1305 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:240
L:1307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:300
L:1309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:360
L:1311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:420
L:1313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:480
L:1833 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:1835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:60
L:1837 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:120
L:1839 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:180
L:1841 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:240
L:1843 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:300
L:1845 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:360
L:1847 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:420
L:1849 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:480
L:1851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:540
L:1853 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:600